

### Claims

What is claimed is:

1. A method for use in a wireless network comprising at least one user device adapted for communication with at least one access point device, the method comprising the steps of:

5                   designating one of a plurality of radios of at least a given one of the user device and the access point device as a master radio and one or more of the remaining radios of the given device as slave radios; and

                  configuring the given device such that in a particular mode of operation the master radio only transmits data and the one or more slave radios only receive data or the master radio only  
10       receives data and the one or more slave radios only transmit data.

2. The method of claim 1 wherein the plurality of radios are configured in parallel to one another.

15           3. The method of claim 1 wherein the plurality of radios are controlled by a common controller.

4. The method of claim 1 wherein the given device comprises the user device.

20           5. The method of claim 1 wherein the given device comprises the access point device.

6. The method of claim 1 wherein in the particular mode of operation at least one of the plurality of radios both transmits data and receives data.

25           7. The method of claim 1 wherein each of the plurality of radios of the given device is compatible with at least one of the 802.11a standard, the 802.11b standard and the 802.11g standard.

8. The method of claim 1 wherein the given device is operable in at least one additional mode of operation in which data to be transmitted is separated into portions, with certain portions being transmitted by the master radio and other portions being transmitted by the slave radios.

5           9. The method of claim 8 wherein the data to be transmitted comprises at least one packet, and further wherein the packet is separated into portions, with different portions of the packet being transmitted by the master radio and one or more of the slave radios.

10           10. The method of claim 8 wherein the portions are transmitted utilizing a predetermined sequence of the plurality of radios beginning with the master radio.

11. The method of claim 10 wherein the predetermined sequence comprises a round-robin sequence which cycles through the plurality of radios.

15           12. The method of claim 8 wherein after transmission of a final portion of a given piece of data the predetermined sequence is reset such that a first portion of a next piece of data is transmitted by the master radio.

20           13. The method of claim 1 wherein the multiple radios of the given device are assigned network names in accordance with a convention which indicates the master or slave designation of each of the radios.

25           14. The method of claim 1 wherein the given device comprises a user device and is operable in at least one additional mode of operation in which each of the plurality of radios is operative to establish a separate and independent connection with one or more access points.

15. The method of claim 1 wherein the given device comprises a user device which in the particular mode of operation communicates in a full-duplex manner with an access point having a

plurality of radios one of which is designated as a master radio and one or more of the remaining ones of which are designated as slave radios.

16. The method of claim 1 wherein the given device comprises a user device which in the particular mode of operation communicates in a half-duplex manner with an access point having a plurality of radios one of which is designated as a master radio and one or more of the remaining ones of which are designated as slave radios.

17. An apparatus for use in a wireless network, the apparatus comprising:  
a processing device having a processor coupled to a memory, the processing device comprising one of a user device and an access point device of the wireless network;  
the processing device further comprising a plurality of radios;  
one of the plurality of radios of the processing device being designatable as a master radio and one or more of the remaining radios of the processing device being designatable as slave radios;

wherein the processing device is configurable such that in a particular mode of operation the master radio only transmits data and the one or more slave radios only receive data or the master radio only receives data and the one or more slave radios only transmit data.

18. A communication system comprising:  
a wireless network including at least one user device adaptable for communication with at least one access point device, wherein at least a given one of the user device and the access point device comprises a plurality of radios;

one of the plurality of radios of the given device being designatable as a master radio and one or more of the remaining radios of the given device being designatable as slave radios;

wherein the given device is configurable such that in a particular mode of operation the master radio only transmits data and the one or more slave radios only receive data or the master radio only receives data and the one or more slave radios only transmit data.

19. An article of manufacture comprising a machine-readable storage medium storing one or more software programs for use in a wireless network comprising at least one user device adapted for communication with at least one access point device, wherein the one or more programs when executed implement the steps of:

5                   designating one of a plurality of radios of at least a given one of the user device and the access point device as a master radio and one or more of the remaining radios of the given device as slave radios; and

                  configuring the given device such that in a particular mode of operation the master radio only transmits data and the one or more slave radios only receive data or the master radio only  
10 receives data and the one or more slave radios only transmit data.